

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**  
**BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re **PATENT** application of

Applicant: Lang, Karl

Serial No.: 09/765,112

Art Unit: 1797

Filing Date: 18 Jan 2001

Title: ANALYZER SYSTEM AND  
DRIVE MECHANISM FOR  
SAME

Examiner: Wright, P. Kathryn

Docket No.: MTI 1877-141

**APPEAL BRIEF**

**Filed electronically on 17 November 2008**

This brief is being submitted in connection with the appeal of the above-identified application, pursuant to the Notice of Appeal filed 10 July 2008 and the Notice of Panel Decision from Pre-Appeal Brief Review, mailed 20 August 2008.

As this appeal brief is filed within two months of the due date of 20 September 2008, as set by the pre-appeal brief conference decision mailed on 20 August, a two month large-entity extension fee is due and paid herewith. The appeal brief fee is also due and paid herewith. If a further fee is required, please charge Deposit Account 19-4076.

**I. REAL PARTY IN INTEREST**

The inventor Karl Lang has assigned the rights in this patent application to Mettler-Toledo GmbH, a Swiss corporation, in a document recorded on 20 April 2001 at Reel 011735, Frame 0513. Due to a change in the legal form of the entity, the real party in interest is Mettler-Toledo AG, a Swiss corporation, as found in a document recorded at Reel 018653, Frame 0961 on 19 December 2006.

## **II. RELATED APPEALS AND INTERFERENCES**

Appellant and appellant's legal representatives are unaware of any prior or pending appeals, interferences, or judicial proceedings, the outcome of which will directly affect, be directly affected by, or have bearing on the Board's decision in the pending appeal.

### **III. STATUS OF CLAIMS**

Claims 2-29 and 35-38 are pending in the case, with claim 35 being the only independent claim. All pending claims are finally rejected and are the subject of this appeal. Claims 1 and 30-34 were previously canceled.

#### **IV. STATUS OF AMENDMENTS**

An amendment was filed on 21 August 2008, after the Notice of Panel Decision from Pre-Appeal Brief Review, mailed 20 August 2008. This amendment has been accepted by the Examiner, as indicated in a paper mailed on 27 October 2008. The claims herein reflect the amendment.

## **V. SUMMARY OF CLAIMED SUBJECT MATTER**

**Independent claim 35** is directed to an analyzer system 1 for immersing at least two instruments 17 (p 13, ln 22-26, Figs 2-4) into a sample and removing the instruments therefrom (p 1, ln 9-14; Fig 1). The system 1 comprises a vertical guide 2 (p 11, ln 14-15, Fig 1). The system 1 also comprises an instrument holder 5 (p 11, ln 23) constrained to move along the vertical guide to selectively immerse or remove the instruments 17. The instrument holder 5 comprises a holder device 15 with at least two apertures 16 (p 13, ln 20-26, Figs 2-4). Each aperture 16 is arranged to receive and hold one of the at least two instruments 17 (p 13, ln 20-26). The system 1 also comprises a washing device 14 (p 12, ln 22-24) with a central opening 38 (p 18, ln 16-22), positioned between the instrument holder 5 and the sample such that the central opening and the holder element are maintained in co-axial relationship as the at least two instruments 17 pass through the central opening, the washing device comprising a jet orifice 41 (p 19, lines 3-7) and a supply conduit 42 (p 20, ln 24 to p 21, ln 1) for a wash fluid, communicated to the jet orifice.

**Claim 2**, which depends from claim 35, adds the further limitation that the washing device comprises a complete, closed wash ring 14 surrounding the instruments over an angle of 360° (p 21, ln 4-7).

**Claim 5**, which depends from claim 2, adds the further limitation that at least two jet orifices 41 are distributed over an internal circumference of the wash ring 14 (p 19, ln 19-21).

**Claim 6**, which depends from claim 5, adds the further limitation that the jet orifices 41 are disposed at substantially equal angles (p 5, ln 8-10).

**Claim 7**, which depends from claim 5, adds the further limitation that the jet orifices 41 are disposed substantially at diametrically opposed locations (Fig. 4; p 19, ln 22-25).

**Claim 8**, which depends from claim 5, adds the further limitation that the jet orifices 41 are disposed at angular intervals of at least 10° and less than 180° (Fig 4; p 19, ln 19-22).

**Claim 9**, which depends from claim 5, adds the further limitation that the jet orifices 41 are disposed at angular intervals of 15° to 20° (Fig 4; p 19, ln 19-22).

**Claim 3**, which depends from claim 35, adds the further limitation that the washing device 14 is constrained for guided movement along the vertical guide 2 (p 12, ln 23-24).

**Claim 4**, which depends from claim 35, adds the further limitation that the washing device 14 is disposed vertically below the instrument holder 5 (p 4, ln 23-24).

**Claim 10**, which depends from claim 35, adds the further limitation that jet orifice 41 is disposed on circumference D of larger diameter than an internal opening width d of the wash ring 14 (Fig. 3,4; p 19, ln 14-17).

**Claim 11**, which depends from claim 35, adds the further limitation that the washing device has at least one wash ring 14 with a common opening 38 for all of the instruments (Fig 3; p 18, ln 16-22).

**Claim 12**, which depends from claim 35, adds the further limitation that the orifice 41 has a diameter of at least 0.3 mm (p 22, ln 20-24).

**Claim 13**, which depends from claim 12, adds the further limitation that the orifice 41 has a diameter of at least 0.5 mm (p 22, ln 20-24).

**Claim 14**, which depends from claim 13, adds the further limitation that the orifice 41 has a diameter of 0.3 to 0.8 mm (p 22 ln 20-24).

**Claim 15**, which depends from claim 35, adds the further limitation that the jet orifice 41 is aimed at a predetermined downward angle (p 20, ln 1-5).

**Claim 16**, which depends from claim 15, adds the further limitation that the predetermined downward angle is substantially between 15° and 40° (Fig 4; p 20, ln 1-6).

**Claim 17**, which depends from claim 16, adds the further limitation that the predetermined downward angle is substantially between 20° and 30° (Fig 4; p 20, ln 5-6).

**Claim 36**, which depends from claim 35, adds the further limitation that the instrument holder 5 has an opening 6 in which the holder device is removably seated (p 11, ln 23-26; p 13, ln 20-22).

**Claim 37**, which depends from claim 35, adds the further limitation that the jet orifice 41 is aimed radially inward to the central opening 38 to spray the wash fluid at a portion of the instruments passing through the central opening (Fig 4; p 20, ln 1-2).

**Claim 18**, which depends from claim 37, adds the further limitation that the wash ring 14 has a distributor channel 42 for the wash fluid that extends along a perimeter of the wash ring (Fig 3; p 20, line 24 to p 21, line 1).

**Claim 19**, which depends from claim 18, adds the further limitation that the jet orifice 41 has an orifice cross-section and the distributor channel 42 has a channel cross-section that is larger than the orifice cross-section (p 22, ln 6-9).

**Claim 20**, which depends from claim 19, adds the further limitation that the channel cross-section is at least five times as large as the orifice cross-section (p 22, ln 17-19).

**Claim 21**, which depends from claim 20, adds the further limitation that the channel cross-section is ten to fifty times as large as the orifice cross-section (p 22, ln 19-20).

**Claim 22**, which depends from claim 35, adds the further limitation that the washing device has at least two rows of jet orifices arranged one below the other (p 22, ln 1-5).

**Claim 23**, which depends from claim 22, adds the further limitation that the rows of jet orifices 41 are arranged on different wash rings 14', 14" (Fig. 6, p 26, ln 3-7).

**Claim 24**, which depends from claim 23, adds the further limitation that the washing device comprises wash rings that are movable in relation to each other (p 26, ln 14-15).

**Claim 26**, which depends from claim 23, adds the further limitation that the system includes a centering device interposed between the instrument holder 5 and the washing device (Fig 4; p 17, line 4 to p 18, line 15).

**Claim 25**, which depends from claim 35, adds the further limitation that the supply conduit comprises a supply channel 29 extending at least partially in parallel with the vertical guide (Fig 3, p 16, ln 13-15).



**Claim 27**, which depends from claim 35, adds the further limitation that the system includes a drive source 13 that moves the instrument holder 5 along the vertical guide (p 12, ln 12-14).

**Claim 28**, which depends from claim 27, adds the further limitation that the drive source also moves the washing device along the vertical guide (p 17, ln 6-10).

**Claim 29**, which depends from claim 27, adds the further limitation that the system includes a take-along constraint allowing a limited range of relative movement between the instrument holder 5 and the washing device 14 ( Fig 4; p 16, line 24 to p 17, line 3).

**Claim 38**, which depends from claim 35, adds the further limitation that the washing device is separate from and movable in relation to the instrument holder 5 (Figs 3, 4; p 12, ln 23-24).

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

**1. THE REJECTION OF CLAIMS 2-29 AND 35-39 UNDER 35 U.S.C. § 103(A) AS OBVIOUS OVER U.S. PATENT 3,552,212 TO OHLIN (OHLIN '212) IN VIEW OF US PATENT 5,650,122 TO HARRIS (HARRIS '122) IS PRESENTED FOR REVIEW.**

**2. THE REJECTION OF CLAIMS 2-29, 35 AND 37-38 UNDER 35 U.S.C. § 103(A) AS OBVIOUS OVER U.S. PATENT 4,338,280 TO AMBERS (AMBERS '280) IS PRESENTED FOR REVIEW.**

## **VII. ARGUMENT**

### **1. THE REJECTION OF CLAIMS 2-29 AND 35-38 UNDER 35 U.S.C. § 103(A) AS OBVIOUS OVER U.S. PATENT 3,552,212 TO OHLIN (OHLIN '212) IN VIEW OF US PATENT 5,650,122 TO HARRIS (HARRIS '122) IS PRESENTED FOR REVIEW.**

This rejection covers all pending claims.

It is the applicant's position that the Examiner has not made a *prima facie* case of obviousness under 35 USC 103(a) with regard to the claims, and especially with regard to independent claim 35.

The Examiner states that Ohlin '212, the primary reference relied upon, provides all limitations of independent claim 35, except the jet orifice that sprays wash fluid was fluid at the instruments. The Examiner further states that one of ordinary skill would have looked to Harris '122 to provide this missing limitation.

The record reflects that this combination of references dates back to the second Office Action, mailed 18 May 2004. Since that time, the US Supreme Court has ruled on the obviousness standard in KSR International Co v Teleflex Inc, 127 S.Ct. 1724 (2006). In late 2007, the Patent Office issued examination guidelines applying that standard. The record also reflects that the primary contentions between the applicant and the Examiner have been over whether there is "teaching, suggestion or motivation" in Ohlin '212 that would lead one of ordinary skill to Harris '122. KSR clearly teaches that "teaching, suggestion or motivation" is not the only test. But it also teaches that an articulation of an adequate basis for combining elements, based on evidence or scientific reasoning, to provide a predictable result is required for a *prima facie* case of obviousness.

Under the KSR rationale of combining prior art elements according to known methods to yield predictable results, the Patent Office guidelines require the Examiner to find: 1) the prior art included each element claimed, although not in a single reference; 2) one of ordinary skill could have combined the elements as claimed by known methods and that in combination, each element merely would have performed

the same function as it did separately; and 3) one of ordinary skill would have recognized the results of the combination were predictable. Applicant asserts that the Examiner has not done this.

Applicant relies upon the following factual findings, in the absence of the Examiner's factual findings:

1. Ohlin '212 does not teach or suggest an instrument holder that passes two or more instruments through the central opening of a wash device. Ohlin '212 teaches treatment of only a single instrument. Col. 2, lines 67-72.
2. The Ohlin '212 device, if used with more than one instrument, loses its stated purpose, which is to prevent wash liquid to drop from the bore 26 into the sample tubes 15. Col. 3, lines 42-45.
3. Although Harris '122 may teach a wash manifold, each instrument (aspiration tube 468) being washed has a single wash tube 488 with a jet orifice directed at it. Fig 14. It appears that the aspiration tubes are arranged linearly and do not pass through central opening of a wash device. There is no teaching of the wash tubes of different aspiration tubes interacting with each other, as they inherently would under claim 5 and its dependents (claims 6-9).
4. Because Ohlin '212 does not teach an instrument holder that passes two or more instruments through a central opening of the wash device, it inherently cannot teach that the washing device has at least one wash ring 14 with a common opening for all of the instruments, as required by claim 11.
5. The high entrance point for the wash-liquid in Ohlin '212 is not conducive to the jet orifice 41, if it was present, being aimed at a predetermined downward angle, since the upwardly-expanding diameter of the recess 31 (Fig 3) would interfere with the flow, so claim 15 and its dependents (claims 16-17) are allowable.
6. Ohlin '212 does not teach a wash ring having a distributor channel for the wash fluid that extends along a perimeter of the wash ring, as required by claim 18, so claim 18 and its dependents (claims 19-21) are allowable.
7. Ohlin '212 clearly teaches that the presence of the instrument 19 in the bore 26 (Fig 3) allows a reservoir 32 of the wash liquid to accumulate. One of ordinary skill would recognize that the use of jet orifices as in Harris '122 to provide the

liquid into the reservoir space would cause significant splashing and be antithetical to the concept of an accumulated reservoir.

When these findings are considered, it becomes very clear that one of ordinary skill in the art at the time of the invention, which was probably before the turn of the century, since the foreign priority application was filed in January, 2000, would not have considered Ohlin '212 and Harris '122 operatively combinable to yield a predictable result.

Further to item 7 above, the Examiner has taken the position that the shape and size of the space between the instrument and the wash ring in Ohlin '212 is "not germane to the argument" and that Ohlin '212 states that the shape of the bore 26 in the wash ring and the relative dimensions of bore 26 and the probe portion 19 to be cleaned are not critical, citing Col. 3, lines 33+ on this latter point. Applicant respectfully disagrees. First, the Examiner's citation is inaccurate. Ohlin '212 says: "The shape of the bore 26 and the relative dimensions of the bore 26 and the probe portion to be cleaned are not very critical, but it will be understood that if the diameter of the bore is too large in relation to the diameter of the probe portion, the flow of wash-liquid and air may be inadequate to ensure an efficient removal of the sample residues, and if the diameter is too small, the sample residues may be wiped off by the lower peripheral edge of the bore and accumulate on the lower surface of the collar 25." Applicant suggests that this indicates that the differences between the two extremes pointed out by Ohlin '212 will be recognized as being quite small, in spite of the Examiner's assertion, and that the depiction of a reservoir of liquid 32 being retained in the cleaning device would be of greater importance to one of ordinary skill than the quoted statement regarding criticality of size. It is also noted that this size range is claimed in claim 1, which is further evidence of criticality.

Based on the foregoing, applicant respectfully proposes that claim 35 and its proper dependent claims are not obvious over the combination of Ohlin '212 and Harris '122 and that the claims be allowed.

**2. THE REJECTION OF CLAIMS 2-29, 35 AND 37-38 UNDER 35 U.S.C. § 103(A) AS OBVIOUS OVER U.S. PATENT 4,338,280 TO AMBERS (AMBERS '280) IS PRESENTED FOR REVIEW.**

This rejection covers all pending claims except claim 36, which requires the holder device to be removably seated in an opening in the instrument holder.

It is the applicant's position that the Examiner has failed to make a *prima facie* case of obviousness under 35 USC 103(a) with regard to the claims and especially with regard to independent claim 35.

The Examiner's current position is that Ambers '280 possesses all limitations of claim 35, except for the holder element having at least two receptacles, but that this limitation is a mere duplication of parts that would be obvious to one of ordinary skill. On this latter point, the Examiner relies upon In re Harza, 274 F2d 669 (CCPA 1960). Applicant respectfully notes that Harza is limited to applications where the duplication of parts does not provide "new and unexpected result."

Ambers '280 is directed to the cleaning of the exterior of a single instrument 24. Applicant does not agree with the Examiner that Ambers '280 is directed to the cleaning of "instruments."

The second subparagraph of the body of claim 35 requires "an instrument holder constrained to move along the vertical guide to selectively immerse or remove the instruments" and that "the instrument holder comprising a holder device with at least two apertures". To meet these requirements in Ambers '280, it is the Examiner's position that the instrument holder is found at reference number 108 and the holder device is found at reference number 130. However, this construction does not meet the requirement of the claim. Support block 108 is movable along slider member 100 (Fig 3, Col. 4, ln 15-21), but wiper 130 is a part of wiper assembly 26 (Fig, 3, the paragraph starting at Col. 4, line 40). Wiper assembly 26 is described as "secured" at the "lower end" of slider member 110 (Col. 4, ln 19-21). Hence, support block 108 cannot "comprise" wiper assembly 26, as it does not move with the support block. To place the wiper assembly 26 into support block 108 would obviate its stated role as a "wiper", as the instrument 24 would remain motionless in it, since the instrument 24 is "fixedly

secured” (Col 4, ln 18-19) to support block 108, by threading of bushing 112 into support block 108 (Col. 4, ln 24-27).

Based on these differences, and lacking an articulated basis for why a person of ordinary skill would make the changes from Amber ‘280 to what is claimed in claim 35, applicant asserts that claim 35 is allowable over Ambers ‘280. With claim 35 allowable, all proper dependent claims of claim 35 should also be allowable. The Examiner has not determined any of the dependent claims as not being properly dependent.

Further, at least two of the dependent claims present limitations that are not met by and or not obvious in view of Ambers ‘280. These are claims 36 and 15

To meet the limitation of claim 36, support block 108 would have to have “an opening in which” wiper 130 “is removably seated.” This element is not met and is not an obvious variation of Ambers ‘280.

To meet the limitation of claim 15, the jet orifices, which applicant admits are present in Ambers ‘280 at reference number 182, 184, would have to be “aimed at a predetermined downward angle.” But Fig. 3 shows them as clearly inclined upwardly. The Examiner provides no articulated basis why a person of ordinary skill would make this change. If claim 15 is allowable, then its proper dependent claims 16 and 17 are also allowable.

**VIII. CLAIMS APPENDIX**

Attached.



## **IX. EVIDENCE APPENDIX**

An Evidence Appendix is attached but sets forth no evidence.

**X. RELATED PROCEEDINGS APPENDIX**

A Related Proceedings Appendix is attached but sets forth no proceedings.

If there are any additional fees resulting from this communication, please charge same to our Deposit Account No. 19-4076.

Respectfully submitted,

Date: 17 November 2008 By: /Stephen L. Grant, RegNo33390/  
Stephen L. Grant  
Reg. No: 33,390  
Standley Law Group LLP  
495 Metro Place South, Suite 210  
Dublin, Ohio 43017-5315

### **VIII. CLAIMS APPENDIX**

2. The analyzer system of claim 35, wherein the washing device comprises a complete, closed wash ring surrounding the instruments over an angle of 360°.
3. The analyzer system of claim 35, wherein the washing device is constrained for guided movement along the vertical guide.
4. The analyzer system of claim 35, wherein the washing device is disposed vertically below the instrument holder.
5. The analyzer system of claim 2, wherein at least two jet orifices are distributed over an internal circumference of the wash ring.
6. The analyzer system of claim 5, wherein the jet orifices are disposed at substantially equal angular intervals.
7. The analyzer system of claim 5, wherein the jet orifices are disposed substantially at diametrically opposed locations.
8. The analyzer system of claim 5, wherein the jet orifices are disposed at angular intervals of at least 10° and less than 180°.
9. The analyzer system of claim 5, wherein the jet orifices are disposed at angular intervals of 15° to 20°.
10. The analyzer system of claim 35, wherein the jet orifice is disposed on a circumference of larger diameter than an internal opening width of the wash ring.

11. The analyzer system of claim 35, wherein the washing device has at least one wash ring with a common opening for all of the instruments.
12. The analyzer system of claim 35, wherein the orifice has a diameter of at least 0.3 mm.
13. The analyzer system of claim 12, wherein the orifice has a diameter of at least 0.5 mm.
14. The analyzer system of claim 13, wherein the orifice has a diameter of 0.3 to 0.8 mm.
15. The analyzer system of claim 35, wherein the jet orifice is aimed at a predetermined downward angle.
16. The analyzer system of claim 15, wherein the predetermined downward angle is substantially between 15° and 40°.
17. The analyzer system of claim 16, wherein the predetermined downward angle is substantially between 20° and 30°.
18. The analyzer system of claim 37, wherein the wash ring has a distributor channel for the wash fluid extending along a perimeter of said wash ring.
19. The analyzer system of claim 18, wherein the jet orifice has an orifice cross-section and the distributor channel has a channel cross-section that is larger than the orifice cross-section.
20. The analyzer system of claim 19, wherein the channel cross-section is at least five times as large as the orifice cross-section.

21. The analyzer system of claim 20, wherein the channel cross-section is ten to fifty times as large as the orifice cross-section.
22. The analyzer system of claim 35, wherein the washing device has at least two rows of jet orifices arranged one below the other.
23. The analyzer system of claim 22, wherein the rows of jet orifices are arranged on different wash rings.
24. The analyzer system of claim 23, wherein the washing device comprises wash rings that are movable in relation to each other.
25. The analyzer system of claim 35, wherein the supply conduit comprises a supply channel extending at least partially in parallel with the vertical guide.
26. The analyzer system of claim 23, further comprising a centering device interposed between the instrument holder and the washing device.
27. The analyzer system of claim 35, further comprising a drive source that moves the instrument holder along the vertical guide.
28. The analyzer system of claim 27, wherein the drive source also moves the washing device along the vertical guide.
29. The analyzer system of claim 27, further comprising a take-along constraint allowing a limited range of relative movement between the instrument holder and the washing device.
35. An analyzer system for immersing at least two instruments into a sample and removing the instruments therefrom, comprising:
  - a vertical guide;

an instrument holder constrained to move along the vertical guide to selectively immerse or remove the instruments, the instrument holder comprising a holder device with at least two apertures, each aperture arranged to receive and hold one of the at least two instruments;

a washing device with a central opening, positioned between the instrument holder and the sample such that the central opening and the holder element are maintained in co-axial relationship as the at least two instruments pass through the central opening, the washing device comprising a jet orifice and a supply conduit for a wash fluid, communicated to the jet orifice.

36. The analyzer system of claim 35, wherein:

the instrument holder has an opening in which the holder device is removably seated.

37. The analyzer system of claim 35, wherein:

the washing device is a wash ring and the jet orifice is aimed radially inward to the central opening to spray the wash fluid at a portion of the instruments passing through the central opening.

38. The analyzer system of claim 35, wherein:

the washing device is separate from and movable in relation to the instrument holder.

**VII. EVIDENCE APPENDIX**

None.



**VII. RELATED PROCEEDINGS APPENDIX**

None.